About ECU and Faculty

- Fall 2019 enrollment: 28,651
- Over 2,000 instructional faculty
- 92% full-time faculty
- 51% tenured/tenure-track faculty

Academic Affairs

- Arts & Sciences
- Business
- Fine Arts & Communication
- Education
- Engineering & Technology
- Health & Human Performance
- Library

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- Allied Health Sciences
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ECU Faculty Salary Studies

2014-2016
- Faculty Salary Equity Study
- Focus: Gender & race/ethnicity
- Scope: Full-time instructional faculty (tenure-track and fixed-term)

2018-19
- Faculty Salary Compression Study
- Focus: Compression & inversion
- Scope: Tenure-track faculty in Academic Affairs and full-time faculty in Health Sciences

2019-2020
- Fixed-term Faculty Salary Study
- Focus: Compression & inversion
- Scope: Full-time fixed-term faculty in permanent positions in Academic Affairs

Annual Faculty Salary Benchmark Reports (CUPA-HR Data)

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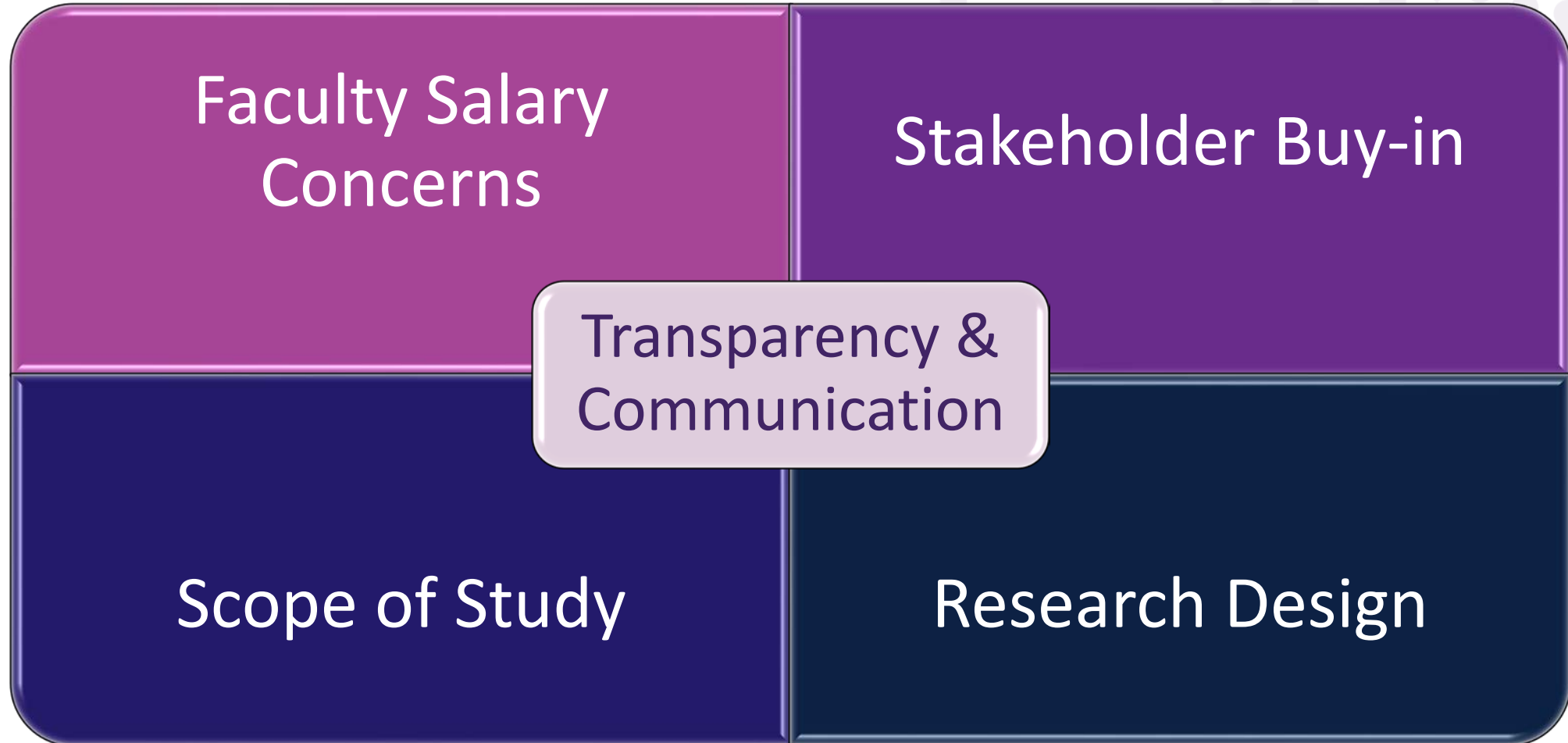
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ECU Faculty Salary Concerns

- *Gender Equity*

- *Minority Faculty Salaries*

- *Salary Compression (by academic rank)*

- *Salary Competitiveness*

- *Fixed-term Faculty Salary*

Dual Purposes for ECU Salary Studies:
- Identify whether there is an institutional-wide equity issue
- Identify individuals (egregious cases) for salary adjustments

Robust Analyses

Actionable Results

Who are your stakeholders?

- Faculty, especially members of the Faculty Senate or other shared governance groups

- Senior administrators

- Deans & department chairs

- Equity & legal offices

And how do you obtain buy-in?

Establishing Effective Advisory Groups

Make sure to include the "right" people.

- Composition of Advisory Groups
    - Faculty senate officers
    - Faculty welfare committee
    - Faculty representatives appointed by administrators
    - Faculty with expertise in statistics or compensation studies
    - Faculty advocates/critics
    - Divisional HR personnel
    - Chief diversity officer/university counsel/president's representative

- Additional Resource People
    - College personnel administrators
    - Associate deans

Scope of Faculty Salary Studies

One study can't address all concerns!

- Define clear research questions and stay focused on these questions.

- Recognize limitations of a study.

- Conduct salary studies periodically to inform decision-making.

Designing Faculty Salary Studies

Study of faculty salary compression

Research Questions:

- What are the predictors of faculty salaries?

- Is there any evidence of *institution-wide* faculty salary compression by academic rank?

- Who are underpaid based on the identified salary predictors?

- How do ECU faculty salaries compare to national benchmarks?

- Did budget cuts and lack of institutional funds for promotional raises during the most recent economic downturn have a significant negative impact on the faculty promoted in those years?

Developing Methodologies

- Literature review & review of studies conducted by other institutions
  - Most common method: linear model (to predict individual salary or estimate size of compression)
  - Most common predictors: academic rank, tenure status, administrator indicator, years in rank/at institution/in academia, college, department, highest earned degree, market factors

- Review of ECU's 2014-16 Salary Equity Study

- Consulting with ECU HR professionals and deans to understand salary practices

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Questions for Deans Regarding Fixed-term Faculty Salary Practices

What factors are considered when determining salary for a fixed-term faculty member?

Is there a relationship between academic title at hire and initial salary level?

Does your unit have a standard promotional raise for fixed-term faculty?

Are there any salary compression/ inversion concerns in your unit?

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Regression Analyses

Benefits

- Campus familiar with the methodology
- Ability to
  - identify significant predictors of faculty salaries
  - identify whether there is a systematic compression issue
  - calculate predicted salaries

Limitations/Challenges

- Less robust for colleges with small number of faculty and/or small numbers of faculty in certain departments or academic ranks
- Communicating statistical terms to a broad audience

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2018-19 Compression Study: Considerations in Modeling Processes

Definition of salary

- Use total annual compensation or base salary?
- How should 9-month & 12-month salaries be normalized?
- How are administrative duties paid?

Proxy for market rate

- Use department (internally focused) vs. national benchmark (externally focused)?
- How should we account for significant pay differences by specialty in health science fields?
- What is an appropriate source of benchmark salaries and what is an appropriate peer group?

Tenure Status

- Should both tenure eligible and fixed-term faculty be included in one regression model?
- Are potential salary predictors for tenure eligible and fixed-term faculty salaries different?

Steps for Regression Analyses

Data Validation

- Performed by Divisional HR
- Correcting errors in data
- Noting factors that might impact a person's salary
- Determining appropriate salary benchmarks

Exploratory Analyses

- Exploring predictors identified from literature review & by advisory groups
- Removing outliers (Cook's D) in regression modeling
- Reviewing low-end outliers to improve model

Final Steps

- Selecting the best model based on model performance, ease of translation and stakeholder input
- Generating a faculty report with predicted salaries and standardized residuals for administrators

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2018-19 Compression Study: Variables in Regression Analyses

	Academic Affairs*	Libraries	Nursing	Allied Health	Brody Medical	Brody Science	Dental Medicine
Department (proxy for discipline)	Y	Y	Y	Y			Y
Salary benchmark					Y, AAMC**	Y, AAMC	
Academic Rank	Y	Y	Y	Y			
Time in Rank	Y	Y	Y	Y	Y	Y	
Tenure/Fixed-term Status	Not applicable		Y	Y	Y	Y	
Hire Year–Terminal Degree Year (proxy for experience at hiring)			Y				
Supervisor/Chair		Y, Supervisor					Y, Chair
Special Credential			Y				
Years since hire							Y
R-squared	0.87	0.82	0.87	0.87	0.79	0.86	0.64

* Includes tenured/tenure track faculty only. Other units include both tenure eligible and fixed-term faculty.

** Association of American Medical Colleges (AAMC) benchmarks reflect discipline, specialty, academic rank, and administrative duties (such as chair, chief, etc.)

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2018-19 Compression Study: Use of Regression Analyses Results

To identify individuals for salary review

Threshold for salary review

- Based on residuals (predicted salary – actual salary)

- Statistical outlier warning: standardized residual < -2.0 or >2.0

- ECU internal threshold for salary review: standardized residual < -.75

- Deans to make salary adjustment recommendations for identified individuals taking account into performance

To identify systematic salary compression

Signs of systematic compression

- Estimate for time in rank was negative and statistically significant

- Estimate for time in rank was not statistically significant

- Difference between estimates for associate professor and assistant professor < ECU standard promotional raise for associate professor

- Difference between estimates for associate and full professors < ECU standard promotional raise for full professor

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Transparency and Communication

- *Online Faculty Feedback Form*
- *Provost holding two open forums for AA faculty to discuss findings*
- *Executive Summary and Final Report of the study posted on Faculty Senate website*
- *Formal report to Faculty Senate followed by a Q&A session*
- *Letters sent to individual faculty regarding their own result and the salary adjustment, if any*

ECU

Faculty Senate | Academic Calendars | Coronavirus

Faculty Welfare Committee

The committee meets on the following Thursdays at 3:30 pm in 142 Rawl Annex:

- September 12, 2019
- October 10, 2019
- November 14, 2019
- December 12, 2019
- January 16, 2020 (Rawl 303)
- February 13, 2020
- March 19, 2020 *(virtual meeting)*
- April 9, 2020 *(virtual meeting)*

Committee Resources

2018-2019 Faculty Salary Compression Study

- Executive Summary (pdf)
- Full Report (pdf)

How to Calculate a Predicted Salary

Example 1: Assistant Professor in Accounting with 3 years in rank:

Base	$63,670
+ Rank (Assistant Professor)	+$0
+ Time in Rank ($388 per year * 3 Year)	+$1164
+ Discipline (Accounting)	+$61,998
= Total Predicted Salary	**=$126,832**

Summary of Lessons Learned

- Selection of methodologies should be guided by principal research questions as well as actionable outcomes of the study.

- Perceptions of salary issues may not align with patterns observed in salary data due to:
  - variation in salary practices across campus and across years
  - variation in composition of faculty across departments
  - faculty turnovers, unit-specific budget situation, retention packages, special hires, and ad hoc equity adjustments

- A successful study requires that IR staff spend time and effort in educating the campus about the analytical process and its results.

- A successful study also requires that administrators take actions and address issues identified in the study.

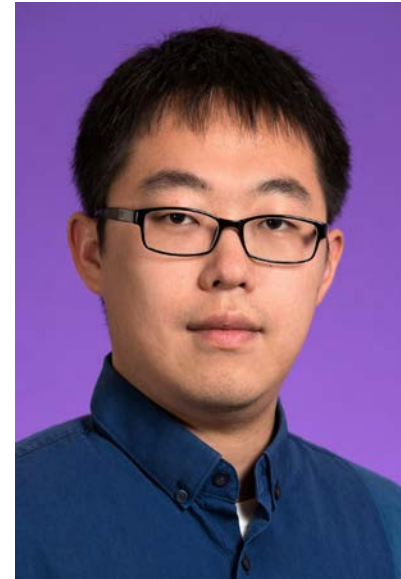# Presenter Contact Information

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barreirotalbertn@ecu.edu

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